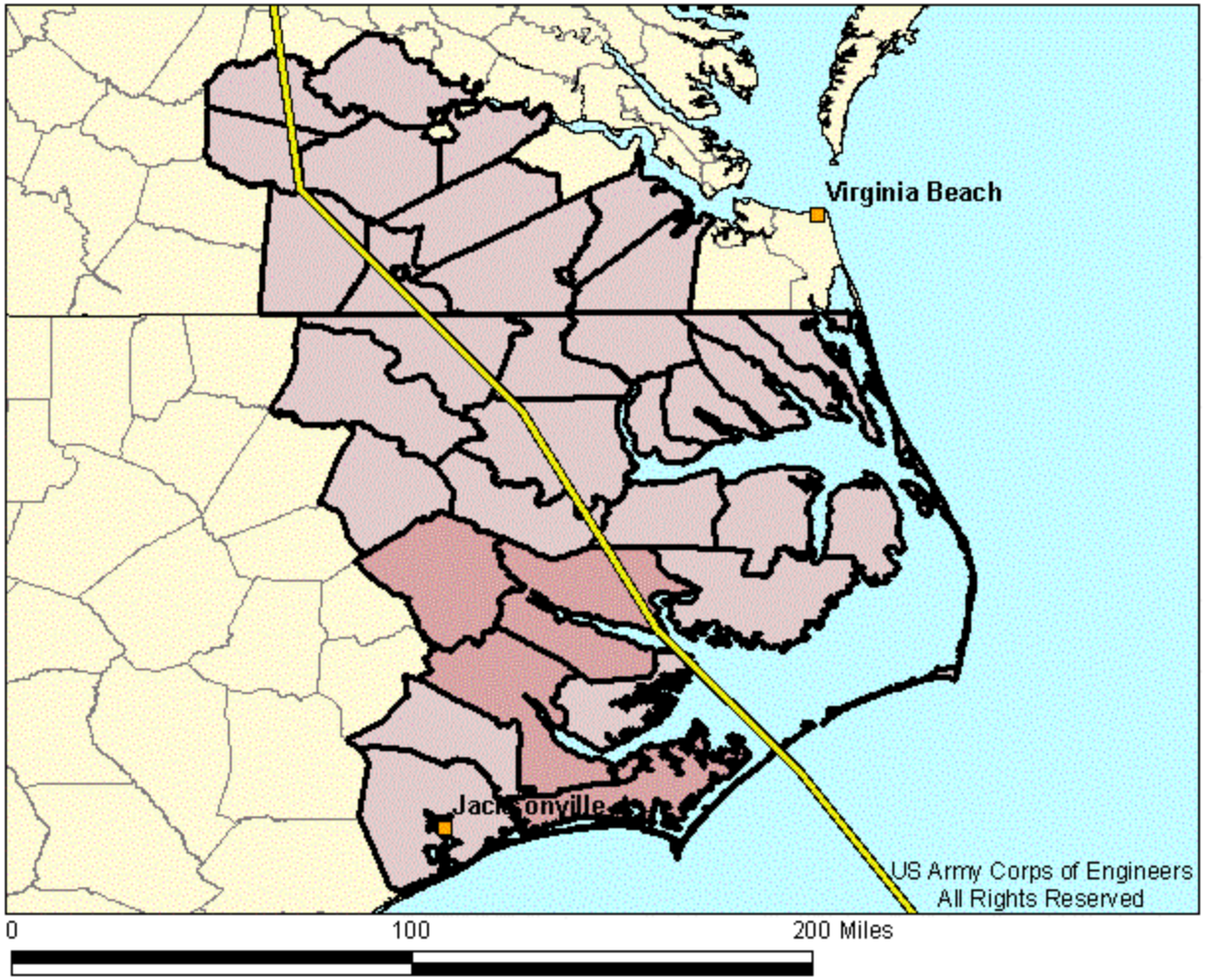
US Army Corps of Engineers

Hurricane Isabel 2003 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

North Carolina - 1,178,000 Yards
Virginia - 114,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC (1500 EDT 05/15/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Debris Model	
Generated By: Siemsen, LRL 1530 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 12

US Army Corps of Engineers

Hurricane Isabel 2003 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Beaufort	144,000
		Bertie	79,000
		Camden	6,000
		Carteret	130,000
		Chowan	18,000
		Craven	128,000
		Currituck	3,000
		Dare	44,000
		Edgecombe	23,000
		Gates	18,000
		Halifax	61,000
		Hertford	48,000
		Hyde	32,000
		Jones	7,000
		Martin	70,000
		Northampton	36,000
		Onslow	16,000
		Pamlico	37,000
		Pasquotank	47,000
		Perquimans	18,000
		Pitt	155,000
		Tyrrell	13,000
		Washington	45,000
North Carolina	1,178,000		
Virginia		Amelia	6,000
		Brunswick	18,000
		Chesterfield	2,000
		Dinwiddie	20,000
		Emporia City	8,000
		Franklin City	10,000

State	Yards per State	County	Yards per County
Virginia		Greensville	12,000
(continued)		Isle Of Wight	< 1,000
		Nottoway	9,000
		Prince George	< 1,000
		Southampton	19,000
		Suffolk City	3,000
		Sussex	7,000
Virginia	114,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Isabel 2003 Debris Model

Generated By:
Siemsen, LRL 1530 EDT 05/15/2008

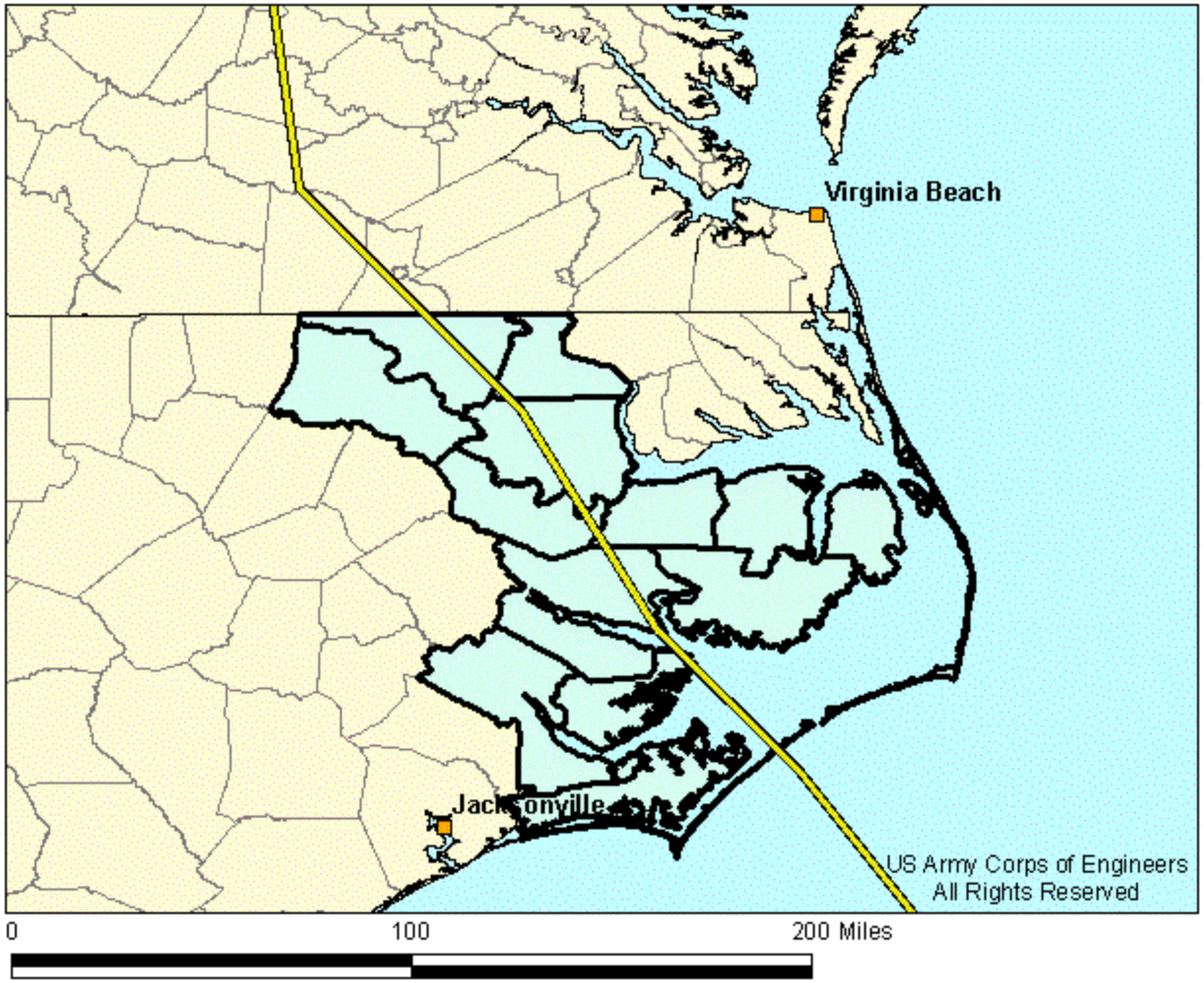
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Isabel 2003 Commodities Model

US Army Corps of Engineers

Landfall Plus About **12** Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
NC – 4/8/17 Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC ***(1500 EDT 05/15/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Commodities Model	
Generated By: Siemsen, LRL 1530 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 3 of 12

US Army Corps of Engineers

Hurricane Isabel 2003 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Beaufort	2
		Bertie	2
		Carteret	2
		Craven	1
		Dare	1
		Halifax	1
		Hertford	1
		Hyde	1
		Martin	2
		Northampton	1
		Pamlico	1
		Tyrrell	1
		Washington	1
North Carolina	17		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Isabel 2003 Commodities Model

Generated By:
Siemsen, LRL 1530 EDT 05/15/2008

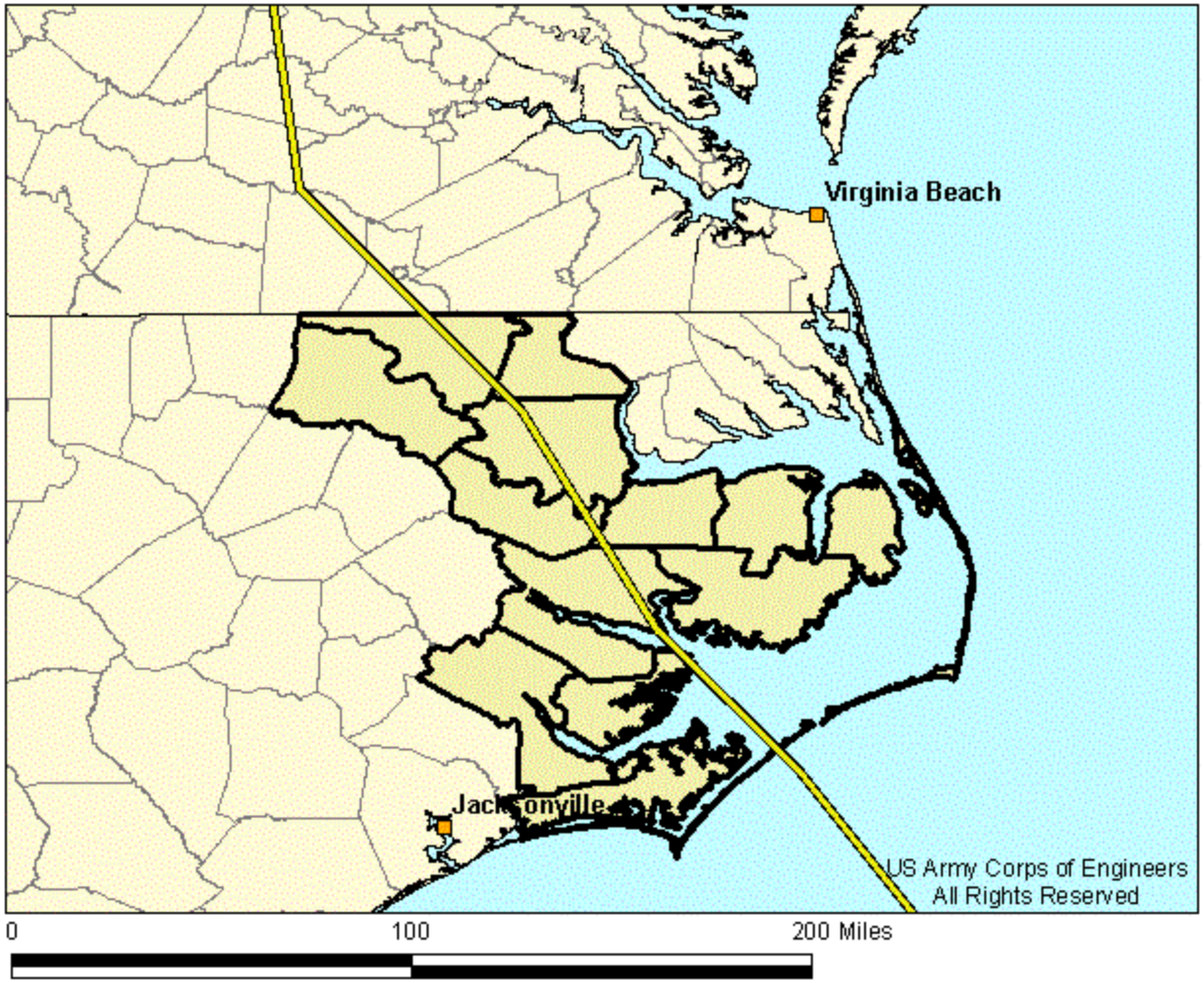
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Isabel 2003 Temporary Roofing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

North Carolina - 1,400

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC (1500 EDT 05/15/2008) forecast. Temporary roofing is based on 3% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Roofing Model	
Generated By: Siemsen, LRL 1530 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 5 of 12

Hurricane Isabel 2003 Temporary Roofing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Beaufort	400
		Bertie	200
		Carteret	300
		Craven	< 100
		Dare	< 100
		Halifax	< 100
		Hertford	< 100
		Hyde	< 100
		Martin	300
		Northampton	< 100
		Pamlico	< 100
		Tyrrell	< 100
		Washington	200
North Carolina	1,400		

Temporary roofing is based on 3% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Isabel 2003 Roofing Model

Generated By:
Siemsen, LRL 1530 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

Hurricane Isabel 2003 Temporary Housing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!

Post Landfall Temporary Housing Model Results

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC (1500 EDT 05/15/2008) forecast. Temporary housing is based on nothing.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Housing Model	
Generated By: Siemsen, LRL 1530 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	

Hurricane Isabel 2003 Temporary Housing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
		No Temporary Housing need expected	

Temporary housing is based on nothing.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Isabel 2003 Housing Model

Generated By:
Siemsen, LRL 1530 EDT 05/15/2008

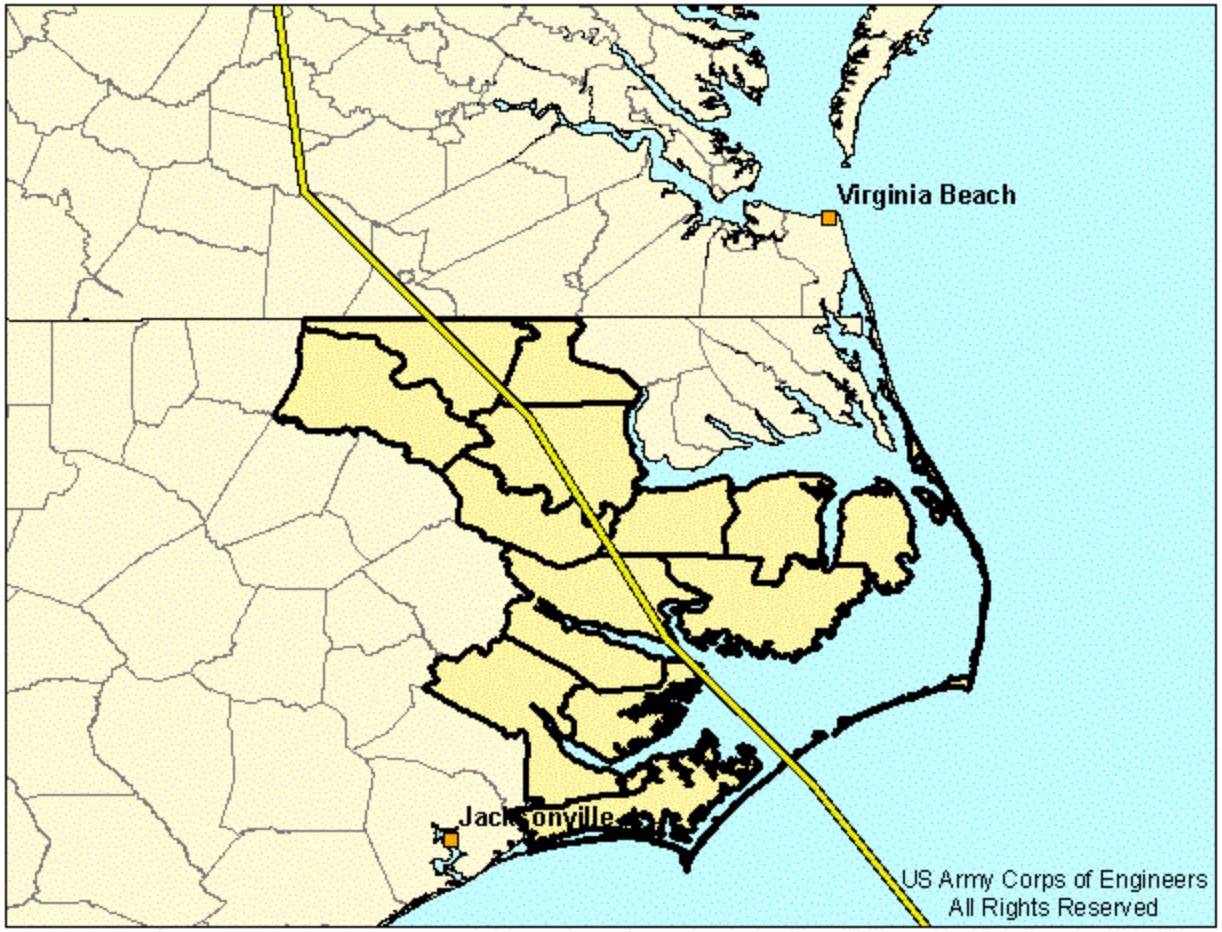
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Isabel 2003 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

North Carolina - 113,000

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC (1500 EDT 05/15/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Isabel 2003 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Beaufort	25,000
		Bertie	16,000
		Carteret	17,000
		Craven	2,000
		Dare	< 1,000
		Halifax	< 1,000
		Hertford	6,000
		Hyde	5,000
		Martin	20,000
		Northampton	3,000
		Pamlico	7,000
		Tyrrell	2,000
		Washington	10,000
North Carolina	113,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Isabel 2003 Population Model

Generated By:
Siemsen, LRL 1530 EDT 05/15/2008

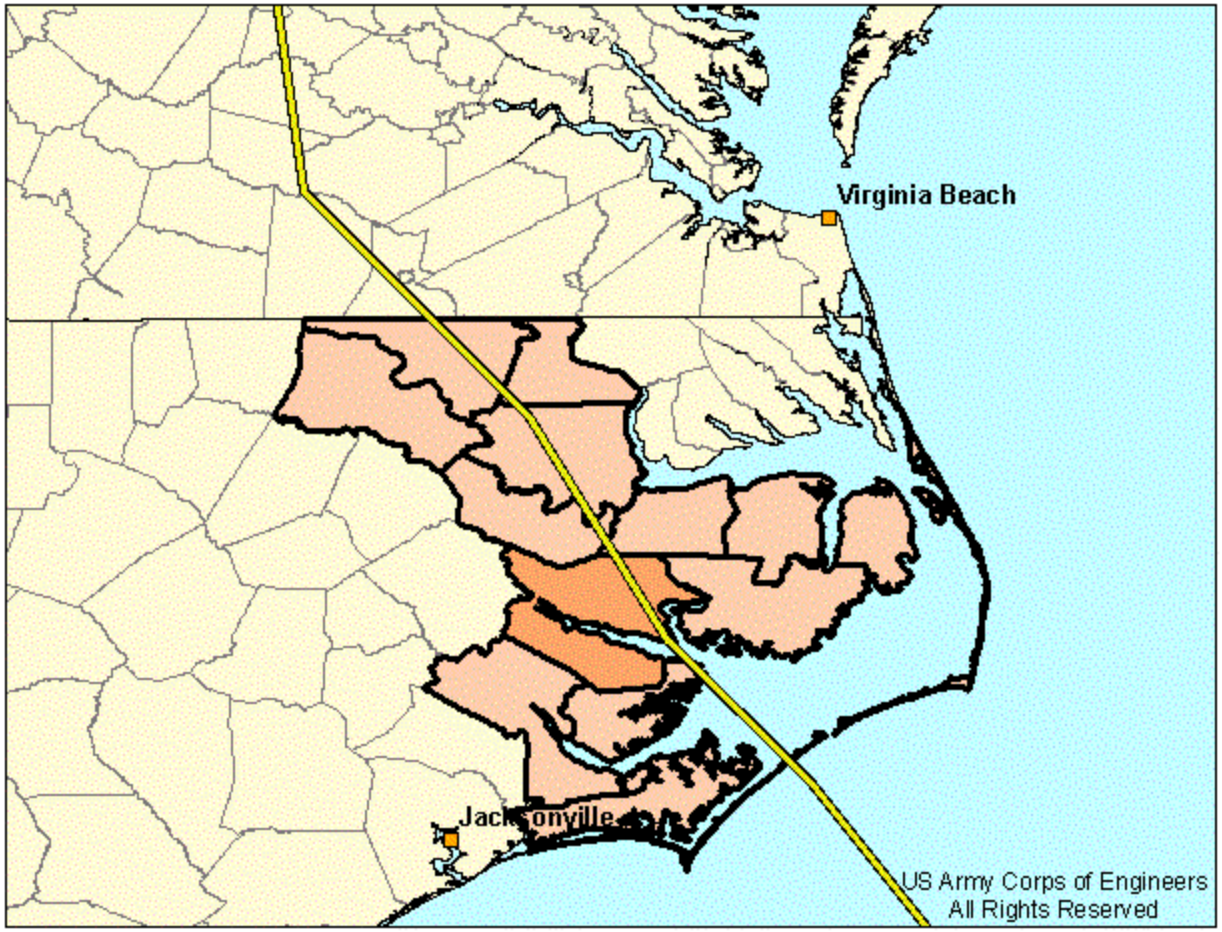
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Isabel 2003 Households Model

Landfall Plus About **12** Hours

For Planning Purposes Only!



Post Landfall Households Model Results

North Carolina - 46,000

Model results per County on following page

This model is based on a Category 1 storm making landfall on Outer Banks, NC.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 1 storm making landfall on Outer Banks, NC. These projections are based on information from the NHC (1500 EDT 05/15/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Isabel 2003 Households Model	
Generated By: Siemsen, LRL 1530 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane Isabel 2003 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Beaufort	11,000
		Bertie	7,000
		Carteret	8,000
		Craven	< 1,000
		Dare	< 1,000
		Halifax	< 1,000
		Hertford	3,000
		Hyde	2,000
		Martin	8,000
		Northampton	< 1,000
		Pamlico	3,000
		Tyrrell	< 1,000
		Washington	4,000
North Carolina	46,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Isabel 2003 Households Model

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Sources:
HURREVAC
LRL-DEBRIS